

WISCONSIN WOOD

MARKETING BULLETIN



Published by Wisconsin Department of Natural Resources, Madison, WI 53711

Sept/Oct/Nov 2005

WOOD MARKETING BULLETIN

The Wisconsin DNR publishes the "Wisconsin Wood" marketing bulletin every two months. It serves the timber producing and wood using industries of Wisconsin by listing items: For sale - forest products, equipment and services, wanted - forest products, equipment and services; employment opportunities. There is no charge for the Bulletin or inserting items in it. Only items deemed appropriate to the timber producing and wood processing industries will be listed. Also the Bulletin will feature forest products utilization and marketing news, safety notes, coming events, new literature, tips to the industry, and listing or employment wanted or positions that are available.

If you know of someone who would like to be on the Bulletin mailing list, please ask them to send their name, address and zip code to the return address on the back page. Also, if you have items to list, send in the form or write a letter to the return address on the back page. Repeat listing of items requires a written request each time the item is to be repeated.

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MARKETING WOOD PRODUCTS IN

CHINA

Where to Begin?

Could It Work for My Company?

February 21, 2006

Are you interested in exploring the opportunity of exporting your wood products to China?? LSLA Education, Inc. is pleased to announce their next educational seminar- MARKETING WOOD PRODUCTS IN CHINA Where to Begin? Could It Work for My Company? - will be held February 21st, 2006 at the University of Wisconsin, Stevens Point Wood Lab.

This course will examine the basics in selling to China – opportunities and potential concerns – how to assess the opportunity, the fundamentals of exports, assistance available to help you export will be presented. The program will provide the basic information on exporting to help you consider if exporting to China is something that your company should consider.

The fee for this seminar is \$150 for Lake States Lumber Association members and \$200 for non-members for the first person in your organization (and \$75 for each additional person from your company or as a guest of your company). The class is limited to about 20 persons. Enrollment fee includes handouts, plus coffee and soda breaks, **lunch will be on your own.**

Instructors will be Bing Yeap International Trade Specialist for the Wisconsin Department of Commerce will talk about the current program available to help companies export to China. Scott Bowe University of Wisconsin Extension will talk about china and how lumber flows into china. A freight forwarder will explain the services that they provide.

Registration is \$150 for Lake States Lumber Association members and \$200 for non-members (\$75 for each person after, if more than one attends from your company). For registration contact LSLA Education, Inc., 500 South Stephenson Avenue, Suite 301, Iron Mountain, MI 49801. Phone (906) 774-6767 Fax (906) 774-7255 or email lsla@lakestateslumber.com. For additional information on the program contact Terry Mace, WI DNR (608) 231-9333.

MICROVELLUM DONATES \$3 MILLION IN SOFTWARE TO WOODLINKS

Microvellum Corporation has made a \$3 million corporate donation of their AutoCAD-based design and

manufacturing software to WoodLINKS USA.

The project started with the initiative of a single teacher, and now every WoodLINKS site across the United States will be working with Microvellum software products.

Last summer, Charles Klea, a teacher at Canyon High School in Phoenix, Ariz, and new to the WoodLINKS program, stopped by the Microvellum booth at the IWF in Atlanta. He wanted to impress upon the company the critical need for students to be trained using current tools – both hardware and software.

In October 2004, Klea received a letter from Taylor Grimes, a Microvellum vice president, indicating that Canyon High School would be receiving a software package valued at over \$63,000.

Seizing the momentum of the Canyon High School agreement, Wilf Torunski, national program director of WoodLINKS, met with Grimes and Dave Peel, president of Microvellum, at their offices in Medford, Ore. After their meetings, Microvellum agreed to expand the donation to cover all WoodLINKS USA schools in the country and their post-secondary education supporters.

"Microvellum is excited to partner with WoodLINKS in the interest of promoting wood technology at every education level," said Grimes. "Microvellum would drastically elevate the students credentials in the workplace, also providing manufacturers the skilled employees they so desperately need in this industry. This is why Microvellum supports the WoodLINKS program and educational facilities who are members."

"I believe the introduction of Microvellum software will greatly enhance the credibility of the wood manufacturing industry in working with public education systems to benefit students, teachers and the industry," said Torunski.

Training of educators took place during the AWFA show in Las Vegas in July

2005. For more information about WoodLINKS visit www.woodlinks.com. Source: *Wood Digest*, April 2005

TWENTY-NINE WOOD PRODUCTS MILLS, 6.8 MILLION ACRES ARE PART OF INTERNATIONAL PAPER'S SELL-OFF PLAN

International Paper wants to sell or spin off its Wood Products Business and 6.8 million acres of timberland, as well as several other businesses, as the company indicates it is narrowing its portfolio to concentrate on its Uncoated Papers and Industrial and Consumer Packaging businesses, which represent 70% of company sales.

The operations for sale accounted for \$925 million, or 40%, of operating profits in 2004. IP estimates that the after-tax proceeds from the potential divestments will range between \$8 billion to \$10 billion.

"We already have a strong global position in uncoated paper and have a growing worldwide platform in packaging. Our portfolio changes will allow us to better focus management attention and financial resources on these key businesses, and can achieve both cost-of-capital returns and profitable growth," says Chairman and CEO John Faraci.

Late last year, the company sold its Weldwood of Canada Ltd. Subsidiary to West Fraser Timber for \$1 billion (U.S.), including lumber, plywood, laminated veneer lumber, and softwood kraft pulp operations.

In addition to divesting its U.S. wood products business and timberland, the company is looking to sell its 50.5% stake in New Zealand's Carter Holt Harvey; the Coated and Supercalendered (SC) Papers Business, including the coated groundwood mill and associated assets in Parana, Brazil; the Beverage Packaging Business, including the Pine Bluff, Ark. Mill; the Kraft Papers Business, including the Roanoke Rapids, NC mill; and its Arizona Chemical business.

Of IP's 6.8 million acres of U.S. forestlands, nearly 6 million acres are in the Southern U.S. The Forest Resources business includes U.S. nurseries and orchards, which produce hardwood and pine tree seedlings, and mineral rights in various states. The business employs more than 1,200. The company's U.S. forestlands revenue in 2004 was \$900 million, which includes harvest and land sales. Last year, the company's forestlands supplied 14.7 million tons of

roundwood to its U.S. facilities, representing nearly a quarter of its wood fiber requirements.

The Wood Products Business produces lumber, plywood, utility poles and engineered wood products. The 2004 sales from the business were \$1.5 billion. The business employs more than 5,500.

It includes 21 sawmills with 2.5 billion BF of capacity, five plywood mills with 1.6 billion SF (3/8 inch basis) of capacity, a laminated veneer lumber mill and two pole plants.

IP wood products mill locations in the U.S. that could be sold include: in Alabama at Chapman, Citronelle, Maplesville, Opelika, Thorsby; in Arkansas at Gurdon and Leona; in Florida at McDavid and Whitehouse; in Georgia at Augusta, Folkston and Meldrim; in Louisiana at Springhill; in Mississippi at Wiggins; in Missouri at Joplin; in North Carolina at Armour and Seaboard; in South Carolina at Johnston, Newberry and Sampit; in Texas at Camden, Corrigan, Henderson and New Boston; and in Virginia at Franklin.

Carter Holt Harvey is Australasia's largest forest products company. CHH includes a medium density fiberboard plant, a particleboard plant, a plywood plant, laminated veneer lumber plant and sawmill operations, as well as 785,000 acres of forestland.

IP's Coated and SC Papers business serves customers in the catalog, magazine and retail insert markets. It has a combined annual capacity of 2.2 million tons. Mills are at Bucksport and Androscoggin (Jay), Me.; Quinnesec, Mich.; Sartell, Minn.; and in Brazil at Arapoti, Parana (the Inpacel mill). The business employs 3,000 in the U.S. and 725 in Brazil. Also included in the evaluation of the coated papers business are the sawmill and approximately 123,550 acres of pine forestlands in Parana that are integrated with the Inpacel coated groundwood mill.

Beverage Packaging provides packaging systems serving the juice, dairy and specialty markets. The business has manufacturing sites at Turlock, Calif.; Plant City, Fla.; Cedar Rapids, Iowa; Framingham, Mass.; Kalamazoo, Mich.; Raleigh, NC. The related assets to be evaluated with the Beverage Packaging Business include the Pine Bluff, Ark. Mill which manufactures 460,000 tons per year of packaging board and employs 1,200.

Kraft Papers from Roanoke Rapids, NC are used in industrial and consumer bags

and sacks, dunnage, roll wrap and many other specialty paper grades. The Kraft Papers Business at Roanoke Rapids has an annual capacity of 400,000 tons and employs 480.

Arizona Chemical is a global leader in pine-based chemicals, with headquarters in Jacksonville, Fla.

Source: *Southern Lumberman*, September 2005

REPORT WARNS OF ECONOMIC SLOWDOWN

Philadelphia – The U.S. economy, as measured by U.S. Industrial Production, has moved onto the backside of the business cycle, according to the Wood Machinery Manufacturers of America's "Summer 2005 Economic Outlook Report."

The quarterly report, developed for the WMMA by the Institute for Trend Research, notes, "The growth rate is still strong at 4.2%, but internal and external factors suggest that the rate of growth will be slowing through the rest of the year and through the first half of 2006. Traditional leading indicators, along with the money supply and consumer activity, support our longstanding forecast for the U.S. economy. The mood among many companies and their customers is one of the optimism with a positive outlook for 2006."

The report warns executives to "watch out for unwarranted optimism in company management as well as in your customers. Keep a weathered eye on inventory levels; nationally, inventory levels are 10.4% ahead of this time last year, while new orders are 7.5% ahead of this time last year. The imbalance will become painful to distributors and end users of these products later this year.

"Commodity prices are expected to lower later this year. Avoid long-term purchase commitments of raw materials. Early 2006 will be a good time to consider buying ahead for many items."

Source: *Wood & Wood Products*, August 2005

FURNITURE FORECASTS NOT SO BAD

Grand Rapids, Michigan – According to BDO Seidman's most recent survey of residential furniture manufacturers, new orders in April 2005 increased 9% over April 2004 figures, and April 2004 orders were 2% higher than April 2003 results. April also marked the second consecutive month of increases following two months

of declining order rates in January and February.

Not only are year-to-date new orders also up (2% over last year's first four months), but more good news comes from the 53% of respondents who reported increases in orders in April, with some reporting significant double-digit increases. This is up from the 45% and 38% reporting increases in March and February, respectively.

Positive numbers are also found in: shipments and backlogs; receivables and inventories; and payrolls and employment. BDO Seidman says of its findings, "The results for April were somewhat better than expected. With orders continuing to show growth, following a reasonably decent growth year in 2004, business seems to be decent. Most people we talk to describe business as 'OK,' but certainly not great."

The report also notes that growth this year is not across the board, as the survey continues to have "very wide swings on a monthly and year-to-date basis for our participants. The good news is that the percentage of participants showing growth has been growing. That certainly needs to continue."

Source: *Wood & Wood Products*, August 2005

ONE YEAR LATER – ACQ, CA, AND CORROSION by Gary P. Martin

Why are there so many different opinions about the corrosiveness of high copper-bearing wood preservatives such as ACQ and CA? There are industry experts who suggest that the concern is all hype and others who claim that these materials are so corrosive that steel, coated or otherwise, should not come anywhere near ACQ/CA.

Even among those who understand the science and wish to take precaution, there is no consensus. Some suggest that a good thick coating of zinc (hot dipped galvanized) will protect hangers, panels and fasteners, while others warn that only stainless steel should be used where there is direct contact between steel and wood.

When you get right down to it, even those who are less concerned about ACQ/CA corrosion base this comfort not in denial of the corrosion potential of the copper treatment, but rather in the expectation that a finished structure will not support the moisture necessary for active galvanic corrosion to take place.

Of all of the arguments created in an effort to rationalize the desire to use traditional fasteners and panel attachment

details in ACQ and CA applications, this one is the most reasonable, albeit tenuous. It is a scientific fact that in order for the galvanic reaction between the copper solution and the steel component to take place, moisture must be present. Galvanic activity is no different than any other electrical circuit. It requires direct contact between an anode (a carbon steel fastener) and a cathode (copper in ACQ/CA solution) without any insulation to break the circuit. When the copper-bearing wood dries out, the copper itself makes very little meaningful contact with the steel fastener. Dry copper in such a solution even in direct contact with the steel or zinc surface of a fastener, does not conduct the electrical activity required to create a galvanic cell. There is simply too much resistance between the dry surfaces to allow voltage to flow between the anode and the cathode. This is the same phenomenon that takes place when one touches the two poles of a 9-volt DC battery with a finger. The potential is there, but the skin just offers too much resistance to the passage of electrons. If one touches the poles of the battery to his tongue, however, he will quickly notice that the resistance is dramatically reduced by the conductive nature of the water in his mouth – he will receive a sharp jolt in the form of a closed circuit and the ensuing "shock".

Moisture performs the same function between a carbon steel component and a copper solution such as ACQ/CA lumber. Make no mistake about it, in an ordinary freshwater environment, the electrochemical potential between these two materials, even if the steel is hot-dipped galvanized, is substantial. If moisture makes the connection, and nothing intercedes to provide resistance, the less noble metal – steel or zinc plated steel – will sacrifice itself to the more noble metal, copper.

So what does it mean when a metal "sacrifices" itself to a more noble metal? Put very simply, atoms that make up the molecules of the less noble (anode) metal are electrically attracted to the more noble metal (cathode), and actually leave the surface of the less noble material to reside among the atoms of the more noble. This means that the mass of the carbon steel component is reduced and the mass of the copper bearing solution (the lumber) grows. This sounds bad, and it is. This theoretical phenomenon is highly detrimental to the intended function of a fastener or other steel component. The

only question for debate is whether in real practice, there tends to be enough moisture present to support the expected galvanic reaction. For the first year of concern (2004) about this high copper wood preservative solution, all that was available was theory – and plenty of it. Manufacturers with solutions touted their effectiveness, and manufacturers without solutions scrambled to find experts to support their position that their existing products would stand up to ACQ/CA.

Experts have written papers and articles about myriad untested phenomena that may occur during the life of a carbon steel and ACQ/CA assembly to save it from the anticipated galvanic corrosion failure that so many builders and manufacturers fear. Some suggest that a well designed, properly constructed assembly will provide a dry or progressively drying environment that will bring the corrosive reaction to a halt before significant damage occurs. Others theorize that zinc forms a protective insulating layer of zinc oxide or zinc hydroxide of adequate thickness and stability to protect the unaffected remainder of the steel component.

The zinc oxide concept is worthy of discussion; however, it is untested and is not recognized as accepted applicable science in any existing materials specification theory. The idea of zinc oxide as an effective insulator, if accepted for design purposes, would be entirely new theory. In existing material specification practice zinc thicknesses are based upon the expected life of zinc as a sacrificial protection agent, based upon its ability to slow a galvanic reaction with ordinary water-based moisture, in a traditional fixture. Engineers do not account for any potential insulating affects of oxidized zinc in life cycle considerations. It is assumed that oxidized zinc is "spent," and while in its oxidized form it is not completely without value, no calculations are made to account for any benefit that it may provide. In other words, zinc, whether in the form of plating or hot-dipped galvanizing, is only of value while it remains zinc – not zinc oxide. If in an effort to minimize the concern for the galvanic corrosion in ACQ/CA, oxidized zinc is considered by designers, they will be setting new precedent and should have this theory backed by extensive competent research.

As stated earlier, the most reasonable defense for not specifying a non-reactive material solution to ACQ/CA is the assertion that moisture levels will not support continuous galvanic activity

between these two dissimilar materials long enough to bring about failure. Using this theory in practice can neither be endorsed nor condemned. It is strictly the burden of the designer to consider this. An architect or engineer must use a prudent risk analysis to consider two questions:

1. What is the likelihood that the ACQ/CA lumber will be moist – through the treatment process itself, any wicking infiltration, or condensation?
2. What is my tolerance for the failure of the component?

If the result of failure is likely to be catastrophic or costly, the designer should carefully consider the first question. Perhaps some extra precaution in material specification is indicated. If a steel component is not critical, water infiltration is unlikely, and the environment will provide for thorough drying of the fresh-treated lumber, a designer may feel comfortable specifying lower-cost fasteners and panel attachment details.

After a full year of use of a ACQ/CA materials in post-frame structures, flat roofs, residential sill plates and wood decks, evidence has shown that the galvanic reaction is taking place. Field failures exist and have been documented. Panels and fasteners have prematurely rusted, and claims have been filed. By no means has there been wholesale catastrophic failure of steel components in the presence of these materials. But the fact that the theory has proven itself applicable in such a short time should concern building designers and material specifiers enough to apply a proportionate amount of caution to this issue.

While there are conflicting recommendations provided by fastener and steel component manufacturers, this is likely a case when advice from the largest, most well funded research should be heeded. The use of components labeled “OCQ ready” or “Safe in ACQ/CA” may sound like enough, but a manufacturer’s labeling of a product or coating this way does not make it so. If an architect decides that caution is warranted, the only certain answer is in the science – steel components, even galvanized steel components, must be insulated from ACQ/CA lumber, and fasteners that penetrate this lumber must be fully resistant to the galvanic reaction. This can be accomplished with a simple two-part detail specification:

1. A non-conductive, water resistant barrier (such as ice and water

shield or equal) should be applied between steel panels or components and ACQ/CA lumber. This shield should completely insulate the steel from the wood.

2. Any fasteners that must penetrate the ACQ/CA lumber should be stainless steel, preferably type 304 or 316.

The combination of stainless steel fasteners and galvanized or Galvalume sheets is perfectly safe. This dissimilarity of these two materials is minimal and will not lead to corrosion of either component. Stainless steel fasteners and galvanized/Galvalume panels have been successfully used together for decades.

With this simple, relatively inexpensive detail, builders and roofers can eliminate the concern for galvanic corrosion due to copper-bearing treated lumber.

Gary P. Martini is vice president of sales and marketing for SFS intec, Inc., a U.S. subsidiary of Swiss-based SFS intec AG, a global manufacturer of fasteners and fastening systems.

Any opinions are those of the author and not those of NFBA or the publishers by fact of publication.

Source: *Frame Buildings News*, August 2005

HARDWOOD FLOORING SHIPMENTS CONTINUE ON HEALTHY PACE

Hardwood flooring shipments for July 2005 were reported at 42,903,000 square feet, a decline (4.8%) from the previous month’s shipments, but a significant increase (5.5%) compared to the same month of 2004, according to NOFMA: The Wood Flooring Manufacturers Assn. Overall 2004 shipments set a 40-year high for the industry. July’s gain compared to July of 2004 brought year-to-date shipments to within a percentage point of the 2004 pace.

Year-to-date shipments for the first seven months of 2005 were 297,339,000 square feet, nearly identical to the same period in 2004 when shipments through the first six months were 299,960,000 square feet. Hardwood flooring shipments for the past 12 months have totaled 515,428,000 square feet, or about a million feet higher than the same 12-month period one year ago.

NOFMA believes the continued healthy pace of shipments reflect both consumer preference for wood flooring products and

particularly strong new home construction and repair and remodel numbers.

Source: *Southern Lumberman*, October 2005

HOME REMODELING GROWS AT BRISK PACE IN Q2

Washington – Remodeling activity continued to grow in the second quarter of 2005, according to the National Association of Home Builders’ Remodeling Market Index (RMI). The second quarter results were slightly below the seasonally adjusted first quarter of 2005, but remained in the positive growth range.

“The high rates of homes sales and home price appreciation are helping fuel strong remodeling activity,” said Remodelers Council Chairman Don Novak, a remodeler from Cedar Rapids, Iowa. “Through we saw little change overall, the RMI still shows above-average activity for the past quarter and this will continue into the third.”

The RMI is derived from a quarterly national survey of more than 500 remodelers and is seasonally adjusted.

The current market conditions index dropped 0.5 point from 52.9 to 52.4. The future expectations index also moved down, from 53.6 to 52.8. However, both indexes continue to show above normal activity, according to the NAHB.

Regionally, strong readings in the Northeast, South and West were partially offset by a sub-par reading for the Midwest.

Source: *Wood & Wood Products*, September 2005

WHERE IS GREEN STEEL,

CONCRETE? By Patrick Moore, The Sensible Environmentalist

Dear Dr. Moore: My son thinks steel is environmentally friendlier than wood because it’s recyclable, but I think wood is better because it grows back. Who’s right?

You’ve touched on a pet peeve of mine – the fact that many environmental groups support the use of steel or cement over wood, even though wood is the most renewable and sustainable of all the major building materials.

Wood also has the least impact in terms of total energy use, greenhouse gases, air and water pollution, and solid waste.

These groups demand that wood be certified as coming from sustainably managed forests – which is as it should be. In North America alone, there are now three independent certification programs,

all requiring third-party audits of forestry activities, and the number of acres certified has risen dramatically. This can only be good for the environment.

But where's the green steel and concrete? Why isn't the environmental movement demanding that these industries submit to their own independent audits for sustainability?

Steel and concrete are both nonrenewable, require vast amounts of energy to manufacture and recycle and are major contributors of carbon dioxide and other greenhouse gas emissions. At the very least, they should not be given preference.

I've ruffled more than a few feathers by pointing this out, but it makes sense to me that using wood is good for the environment.

When we use wood, we create demand in the market, which gives landowners around the world an incentive to plant more trees and keep land forested. As an added benefit, growing forests take carbon dioxide out of the atmosphere, which helps to offset emissions released through industrial processes.

There are those who claim that each time we use wood, we cause a little more forest to be lost. This cannot possibly be true when you consider that North Americans consume more wood per capita than anyone else in the world and yet our forests cover about the same area of land as they did 100 years ago. Does this not stand as proof that our forests are being renewed?

We have the tools at our disposal to achieve real environmental progress.

As a sensible environmentalist, I believe that one answer is to choose renewable, energy efficient materials such as wood. (Questions may be sent to Dr. Moore at the following e-mail address:

Patrick@SensibleEnvironmental.com.)

Source: *Pallet Enterprise*, October 2005

KATRINA'S IMPACT Only Minor Gains Expected

Lumber and especially plywood and OSB prices have risen significantly following Hurricane Katrina's devastating impact on buildings and people in and around the New Orleans area. **However, we expect this surge to be shortlived as inventory levels get rebuilt.** For lumber, there was already a glut of capacity showing up in the markets, and prices are expected to move closer to cash-cost levels by as early as November. OSB and plywood producers are likely to enjoy a longer run,

perhaps returning to previous levels by the end of the year.

A brief analysis supporting this outcome encompasses the following elements:

Field inventories and lumber prices were very low prior to Katrina, so the rebuilding effort has allowed prices to increase, and this period should be short-lived.

Southern production capacity that was knocked out is almost all back on line.

Timber salvaging of an estimated 19 billion bf of timber will likely result in additional SYP lumber production, increasing supply. Of note, Sweden's January windstorm felled a similar volume, while B.C.'s mountain pine beetle-attacked timber involves a volume three to four times that of the storm damage in the U.S. South.

An assessment by the Red Cross indicates that 275,000 homes were destroyed and another 225,000 were damaged.

The time period to repair and replace all of these housing units would be at least five years, with no real building taking place until well into 2006.

The APA's analysis indicates that the volume of building products required to repair or replace these housing units over a five-year period would involve another one billion bf of lumber per year and about 725 million sf of structural panels.

Another 10% could be added to account for non-residential construction replacement. **These annual volumes represent less than 2% for both U.S. lumber and structural panel consumption against a backdrop of ample industry lumber and panel capacity.**

Suitable production capacity in the U.S. and Canada, coupled with rising offshore imports, would raise the question of why the U.S. Administration would need to consider reducing import duties on building products to address the impact of Katrina.

The U.S. economy is expected to be marginally impacted by Katrina, but its disruptions on oil shipments has impacted energy prices, and this will be negatively felt by wood producers and consumers alike.

Despite a few silly predictions (G-P: "It's going to affect the building products marketplace for 18 to 24 months"), **most analysts agree that Katrina's devastation will provide a small increase in overall demand against a backdrop of**

decreasing housing starts and rising production, capacity and imports.

Source: *Wood Markets* (The Monthly International Solid Wood Report, September 2005)

Forest Product Society hires new Executive Director.

Madison, Wisconsin – Carol Lewis of Cordova Tennessee has been named by the Forest Products Society Executive Board to replace Executive Vice President Arthur Brauner, who will retire on January 1, 2006. A native of southern Indiana, Ms. Lewis comes to the Society with more than 15 years experience in the field of education and in not-for-profit organization management. She began her professional career as an Assistant Plant Manager/Office Manager with Mould-Rite, Inc. in Pekin Indiana, a producer of fine hardwood flooring and mouldings. From 1993 to 1996 she served as Project Coordinator at Borden Jr./Sr. High School in Borden Indiana, managing the school's computer information system and coordinating all special projects and events, including the school's fund raising program. In 1996 Carol joined the staff of Koetter Woodworking in Borden Indiana and soon took responsibility for the coordination of all facets of the design and development of The Forest Discovery Center in Starlight, Indiana. The concept behind The Forest Discovery Center originated with the Koetter family, who had a long-range vision to create a facility which would allow them to educate the public about responsible forest management, the huge impact wood and wood products have on our everyday lives, and about the many positive aspects of the forest products industry. From 1997 to 2002 Carol served as both the Executive Director of the Starlight Visitors Association and as the Executive Director of The Forest Discovery Center. In October of 2002 she left southern Indiana to join the staff of the National Hardwood Lumber Association (NHLA) in Memphis, Tennessee as Associate Executive Manager. During her tenure with NHLA she was responsible for oversight of the operation of the 14-week NHLA Inspection School and for coordination and implementation of all NHLA educational programs. She is a avid gardener, walker and reader.

The Forest Products Society International Headquarters is located in Madison, Wisconsin, USA. A full-time professional

staff in Madison, and an extensive network of volunteers at the local and regional level, generate the many services the Society provides. Further information on the Society can be obtained by contacting Forest Products Society, 2801 Marshall Court, Madison, WI 53705-2295 Phone (608) 231-1361, FAX 231-2152, E-mail membership@forestprod.org, Web Site: www.forestprod.org

TACKLING THE PINE BEETLE PROBLEM

The grind-in-place solution by Jim Wahl

"People are afraid. Mountain pine beetles are hatching earlier, expanding their range and reproducing faster than usual," said Nancy Fishing, vice president of the Colorado Forestry Advisory Board. "It is a wildfire of mountain pine beetles, and it is moving across the landscape in a way that no one could have anticipated."

Each year the problem escalates. Lodgepole, ponderosa, Scotch and lumber pine are all susceptible to the invasive beetles. The pines can be located in thousands of forested acres, in a community park or in a backyard. Older pines are at greater risk for mountain pine beetles to begin boring into their bark and laying eggs. However, pines under stress from crowding, drought, fire or root damage are also vulnerable.

"The swarms emerge from mid-July to mid-August to begin looking for new host trees," says Hans Rinke, a forester at Colorado State Forest Service. All species of the pine bark and Ips beetles reproduce in relatively the same fashion. The adults tunnel into the bark of a pine tree making an area for the eggs. The eggs mature and hatch into larvae, which spend the winter months eating away at the inner bark of the tree. The larvae then pupate, hatch and fly as adults looking for new trees to infest.

Thousands of larvae eating away at the inner bark are just one part of the problem. When the adult mountain pine beetles bore into a pine tree they also introduce the spores of the blue stain fungus. Within the first year the fungus develops and stains the wood blue, decreasing the value of the lumber. After the second year woodborers typically move into the tree. They begin the process of boring holes through the tree, which makes it useless to the timber industry. If pine beetles begin infesting an area, the only solution is to act quickly to prevent the trees from losing value or harboring developing larvae that will emerge and fly the following year to spread and infest more pines.

"The biggest issue we see is that people don't treat aggressively enough. It is the "We don't want to cut down the trees around our houses mentality," says Fishing. "Every year there are more trees dead because people don't want to aggressively attack the problem and thin out their forest."

You can never be too thin

"The only long-term remedy is to thin susceptible stands leaving behind well spaced, healthy trees," says Dave Leatherman, an entomologist at the Colorado State Forest Service. The forests that are most affected by the beetles are older and crowded. Thinning out the forest and destroying the trees that are under stress, either because they older, injured, fire damaged, crowded or have root disease, are the only true long-term solutions. Pines that have been attacked by the beetles must be destroyed before the larvae can develop into adults, fly and infest more trees.

"The Bull Hog reduces the size of the material enough that the larvae will actually die," says Hal Hagen, vice-president of Alternative Land & Forest Technologies. "We are using the Bull Hog to grind trees that have been infected and those that are dead." One of the many advantages of the product is that the trees can be grounded in place, keeping the mulched tree in the immediate vicinity of the infected tree. Since the mulched material stays in close proximity to the tree from which it came larvae are not dispersed. Because of their exposure to the elements, the larvae in the mulched debris are more susceptible to winterkill than they are when inside a host tree or when inside larger diameter logs.

Grinding the trees in place also helps to reduce and redistribute the forest fuel load and make decomposition easier. "When you spread out the chips, it spreads out the nutrients and makes them available to the trees sooner, as the chips break down faster." Says Denise White, a forester at the Colorado State Forest Service. The more nutrients a tree has, the more capable it is of fending off a mountain pine beetle attack.

A crowded forest makes pines more susceptible to a beetle attack. However, a pine forest that has been thinned allows for each pine to have plenty of sunlight, water and nutrients, making it a stronger tree more capable of surviving a beetle attack. Healthy pine trees that have ample water supply will in fact pitch out the invading beetles by washing them out of the

tunneled holes with sap. Trees that have been attacked by mountain pine beetles will have pitch holes that look like popcorn stuck to the bark of the tree.

The pine beetle problem isn't restricted to just the Colorado region. Several species of pine beetles wreck havoc on forests throughout the United States. In the New Mexico region it is the pinyon Ips beetles (engraver beetles) that cause damage to forests.

The Bull Hog, manufactured by Fecon, Inc., has been used with great success at a site near Santa Fe, New Mexico. The U.S. Forest Service wanted to reduce the fuel loading and the potential of bark beetles coming through and killing the trees. "They ground them in place," says Brian Giles, a research plant pathologist at the U.S. Forest Service Rocky Mountain Research Station in Flagstaff, Arizona. "They didn't even cut down the tree. They just started at the top and ground the tree down because the little chips were less of a fire hazard than the cut tress or letting the trees be infected by bark beetles."

"The chips aren't as fine as what you might see in a residential area. It is a coarse chip that doesn't evenly cover the forest floor. It is chunkier, which helps it to decompose, and the chips dry out fast, which inhibits bark beetles from moving in," said Deb Allen-Reid, U.S. Forest Service zone leader for forest health in Region 3 (Southwestern Region), New Mexico.

Alternate treatment methods

There are several short-term remedies such as protective spraying of unattacked trees. The protective spray must be applied to the entire bark of the tree including any large limbs, which makes it a time intensive project that must be repeated annually.

Other preventive measures are spraying an attractant pheromone away from the area that is being protected to lure the mountain pine beetle to another area. The main problems with this treatment is it is time intensive, must be repeated annually and locating an area that is away from pines is difficult as the pine beetles will attack forest, landscape and ornamental pines.

On the opposite side of that, there is a pheromone that warns the bugs to stay away, but this treatment shares the same downfalls as the attractant spray in that it is intensive and has to be done annually.

Additional measures that can be taken with trees that have been attacked are covering, burning or debarking, but these

measures are just stop-gaps to the magnitude of the problem.

The long-term solution to thwarting pine bark beetle attacks, no matter what state they occur in, is to aggressively thin the pine forests, remove old, damaged or diseased trees, and destroy trees that have been attacked. Professional foresters are finding that the simplest method to do that is with grind-in-place equipment.

Source: *Forest Products Equipment*, October 2005

HARD SURFACE FLOORING

The United States demand for hard surface flooring is projected to advance 5.5 percent per annum through 2009 to 11.7 billion sq.ft., a slight acceleration over the 1999 to 2004 period.

Hard surface flooring is expected to gain significant market share from carpets and rugs going forward, driven by growing consumer preferences for high-end products such as laminates, ceramic and natural stone tile, and wood, as well as increasing interest in natural and environmentally responsible products such as natural stone, wood, cork and bamboo. These and other trends are presented in Hard Surface Flooring, a new study from the Freedonia Group, Inc., a Cleveland-based industrial market research firm.

Trends toward high-end, value-added products will help boost value gains, although price increases are expected to moderate going forward due to market maturity and intense price competition from imports. Additionally, costs for crude oil (an important raw material in vinyl and laminate flooring production) are anticipated to soften from recent historical highs, which will alleviate pressure on manufacturers to raise prices.

Through 2009, vinyl flooring will continue to be the leading hard surface flooring product, despite losing significant share to laminate flooring and ceramic tile. Vinyl will benefit from its low price and performance characteristics. Laminate flooring is expected to increase its share of the hard surface flooring market and provide the best opportunity for growth by far through 2009. Gains will be driven by continuing popularity and increasing consumer familiarity, as well as the product's attractive price point compared to the flooring choices that it mimics, such as wood. Consumer interest in high-end flooring products will aid demand for wood and ceramic tile floor coverings.

The residential building market is expected to provide the best opportunities

for hard surface flooring, with demand rising 6.9 percent per year through 2009 to 5.8 billion sq.ft.

Despite a decline in single-family housing activity, gains in multifamily and manufactured housing construction will aid growth. Advances will also be supported by an acceleration in residential repair and improvement spending. The nonresidential market will see accelerating growth through 2009, bolstered by a significant rebound in new construction spending, particularly in the office and commercial segment. A rebound in transportation equipment production will benefit demand for hard surface flooring in motor vehicle, aircraft, recreational vehicle and boat markets.

Source: *Wood Digest*, October 2005

BUT FIREWOOD LOOKS LIKE A SAFE BET

As the price of home heating oil and natural gas rises, demand for firewood is growing, and so is the cost. Hillsborough, New Hampshire County Forester Jonathan Nute said prices for a cord of firewood in the Granite State are up \$30 to \$50 compared to last years. "You're looking at \$200 to \$220 to \$230 for dry wood," he said. One firewood dealer was asking \$300 for a cord of dry wood after raising his prices twice in August.

A cord of firewood produces about as much heat as 200 gallons of heating oil, which at today's prices can set homeowners back more than \$500. Sales of wood and pellet stoves have reportedly increased by 80 percent in the first six months of the year compared to last year, the Pellet Fuels Institute in Arlington, Virginia has reported, and that was before the recent hurricanes. Sales of pellet stoves are reportedly outpacing those of conventional wood stoves and furnaces.

Some New Hampshire home heating oil companies are responding to volatile oil prices by suspending programs that allow customers to buy a season's worth of fuel at a fixed price. And there's apparently still plenty of potential for the wood stove and firewood industry to grow. In Maine, which has a relatively high percentage of wood burners, 75 percent of homeowners burn either oil or natural gas, while only six percent heat with wood, according to information gathered for the 2000 Census. Source: *The Northern Logger and Timber Processor*, October 2005

Housing Starts Decline in August

U.S. housing starts dropped by a larger-than-expected 1.3 percent in August as a 9.4 percent slide in multifamily housing construction offset a slight increase in groundbreaking on single-family homes, a Commerce Department report showed. Hurricane Katrina, which hit the U.S. Gulf Coast at the end of August, had a minimal impact on the housing starts data, the Commerce Department said. It noted metro areas most affected by the hurricane accounted for about 1.1 percent of total permit authorizations in the United States in 2004, and 2.4 percent of permit activity in the South.

August housing starts slowed to a 2.009 million unit annual rate, down from July, which saw starts revised down to a 2.035 million unit pace from an originally reported 2.042 million unit pace. Wall Street economists had expected housing starts to decrease to a 2.025 million unit annual pace in August, saying Hurricane Katrina disrupted construction late in the month.

Total single-family housing starts edged up 0.1 percent to a 1.709 million unit pace. But multifamily starts tumbled 9.4 percent to a 300,000 unit pace in August. Permits for future groundbreaking, an indicator of builder confidence, were also weaker than expected, falling 2.2% to a 2.124 million unit pace. Economists expected permits would decline to a 2.143 million unit pace in August from a revised 2.171 million unit pace in July.

Low mortgage rates have supported the housing sector for more than four years. Even though the Federal Reserve has raised its target for short-term interest rates, long-term have stayed low, holding levels that remain below a year ago. Economists have predicted some slowing in the market, but home construction and sales data have yet to show much sustained easing. Housing starts rose 13.3 percent in the U.S. West but dropped 6.6 percent in the South, 5.2 percent in the Midwest and 4.1 percent in the Northeast.

Source: *The Northern Logger & Timber Processor*, October 2005

Coming Events

Marketing Wood Products in China (PRC) – How to begin? Could it be for you?

Feb 21st , 2006 UWSP Wood Lab

Considerations in selling to China – opportunities and potential concerns – how to assess the opportunity, the fundamentals

of exports, assistance available to help you export we be presented. The maximum class size about 20. For additional information on the session contact Terry Mace, WI DNR (608) 231-9333 and for registration and costs information please contact LSLA at 906-774-6767.

**Secondary Manufacturing
Equipment Setup and Maintenance
(at Fox Valley Tech)**

April 4th 2006 Fox Valley Tech

This course will examine basic setup and maintenance of wood product manufacturing machine centers, such as planers, moulders, CNC, etc. Representatives from machinery manufacturers will explain the latest advances and options in equipment. Maximum class size about 25. For additional information on the session contact Terry Mace, WI DNR (608) 231-9333 and for registration and costs information please contact LSLA at 906-774-6767.

**Is Tie Production Right for My Mill?
May 2nd 2006 UWSP Wood Lab**

Are you making more money in sawing that log strictly to lumber? Or would it be better to saw a tie? This course will show you how to determine the correct answer to that question specifically for the circumstances in your mill, with your markets and equipment (and how to recalculate it in the future as markets may change). Simple methods of determining profitability that will quickly give you ballpark answers will be explained, along with more detailed calculations. Tie grading will be discussed, both in the classroom and "hands-on" in grading ties, showing specifically what kinds of defect are not acceptable and what can be in the tie. For additional information on the session contact Bob Govett, UW Stevens Point (715) 346-4212 and for registration and costs information please contact LSLA at 906-774-6767.

**Sawmill or Dry Kiln Startup and
Expansion - Could It Be Profitable?
June 6th 2006 UWSP Wood Lab**

This course will examine the basics of the pre-feasibility financial planning for a sawmill or kiln operation startup (or expansion). Course will focus on what you need to seriously consider before developing the business plan. Participants will leave with computer spreadsheets they can use for such analyses and with training in how to use them. Lenders consider this

kind of analysis to be important when considering financing. Participants will have the opportunity to tailor their financial plan spreadsheets with follow-up one-on-one meetings. For additional information on the session Bob Govett, UW Stevens Point (715) 346-4212 and for registration and costs information please contact LSLA at 906-774-6767.

**Is it Profitable to Saw This Log?
and
Identifying and Correcting Problems
in Your Sawmill to Increase
Profitability**

June 7th 2006 UWSP Wood Lab

Are you making or losing money in sawing that log? This course will demonstrate how to determine what you can afford (or cannot afford) to pay for logs of various species and grades and how to determine your profit or loss per MBF, for logs of any specific and grade. This course will also demonstrate tools and techniques used in sawmill troubleshooting and production process improvement. For additional information on the session contact Bob Govett, UW Stevens Point (715) 346-4212 and for registration and costs information please contact LSLA at 906-774-6767.

**Wood Fueled Boiler - Could It Save
You Money?**

July 11th 2006 UWSP Wood Lab

This course will examine the basics of the pre-feasibility financial planning for replacing an existing boiler with a wood-fueled boiler. Course will focus on key considerations and how to determine potential gross and net savings associated with reduced fuel costs. Participants will leave with computer spreadsheets they can use for such basis analyses and with training in how to use them. Also if they desire, they can bring their basic information and preliminary analyses can be run during the short-course. For additional information on the session contact Bob Govett, UW Stevens Point (715) 346-4212 and for registration and costs information please contact LSLA at 906-774-6767.

Lean Manufacturing Workshop

July 25th 2006 UWSP Wood Lab

This workshop will help wood products businesses identify target opportunity areas in their company for lean manufacturing, provide a guide for the implementation of "lean systems" and direct the organization toward a philosophy of continuous

improvement needed for today's increasing business competition. For additional information on these workshops contact Brian Brashaw, University of Minnesota NRRI (218) 720-4248 and for registration and costs information please contact LSLA at 906-774-6767.

**China's Boom: Implications for
Investment & Trade in Forest Products
and Forestry**

Vancouver, BC, Canada – This conference will be held Wednesday, January 18, through Friday noon, January 20, 2006 at the Westin Bayshore Resort & Marina, Vancouver. British Columbia, Canada.

China's phenomenal growth rate and its rapidly rising investments in forestry and forest products have substantial global implications for North America and other major global players in the forest products arena. This important conference will bring together forest products manufacturers and suppliers, and consultants, investors, economic development personnel, policy makers, educators, and researchers to discuss the latest information on China's emerging role in global forest products trade. The conference will feature technical and poster presentations, discussions, and tabletop exhibits on topics such as:

Understanding China and Chinese Business Conditions

China's Wood Products Consumption: Current and Future

Meeting China's Fiber Demand: Who Will Supply the World's Largest Forest Products Consumer (and perhaps Producers)?

China's Competitive Structure Opportunities in China's Forest Products Market

Threats to Non-Chinese Wood Products Producers

The conference is sponsored by the Forest Products Society (FPS); the Center for International Trade in Forest Products (CINTRAFOR); CIBC World Markets, Inc.; Forintek Canada Corporation; Paperloop/RISI; and USDA's Forest Services Forest Products Laboratory (FPL).

For further information, contact the Conferences & Meetings Department, Forest Products Society, 2801 Marshall Court, Madison, WI 53705-2295 USA; Phone (608) 231-1361, ext. 208, FAX (608) 231-2152, or e-mail conferences@forestprod.org. Complete information on the conference including hotel and conference registration forms

can be found at
<http://www.forestprod.org/confinternationalna>
[ltrade06.html](http://www.forestprod.org/confinternationalna).

2006 LSLA Winter Meeting,
January 19th & 20th, 2006 at the Mead
Inn., Wisconsin Rapids

The LSLA Winter meeting will be all new! Find out what is going on with your association by attending the committee meetings on Thursday afternoon. Meet friends, fellow lumbermen, supporting vendors, and associates at the cocktail hour. Attend the banquet on Thursday evening and hear keynote speaker Vince Lombardi, Jr. The Friday breakfast will include a presentation (European Markets) by George Barrett - Weekly Hardwood Review, followed by a fascinating presentation on China by Dr. James Chan, a world renowned and recognized authority on Asian Marketing.

To view a sample of James Chan's unique presentation for the American Hardware Manufacturers Association, go to www.ahma.org or click on "International Trade Conference." You'll find a sample of a presentation that he custom-prepared for the U.S. hardware industry.

James Chan is the author of the book, Spare Room Tycoon: Succeeding Independently, the 70 Lessons of Sane Self Employment. The book recounts the stories of 40 men and women including James Chan who have succeeded in turning personal passions into successful enterprises. Autographed copies of the book will be available at the event at \$20 per copy for people who want to understand the minds of successful entrepreneurs. To view James Chan's background, go to <http://www.AsiaMarketingManagement.com>.

For registration and costs information please contact LSLA at 906-774-6767.

FOR SALE

Timber and Forest Products

Surplus log home materials: 2x6x8' shiplap siding; 2x8x8' shiplap siding; faux corners; 6x8xRL t&g logs. Contact Bob: (610) 621-2893 ramco@comcast.net

Dowels, rods, poles, 3/4" to 2-1/2" diameter, Lengths up to 16 ft. long with no splicing. Can splice poles longer. Ideal

for tool handle replacements. We also make factory cart truck stakes, and replacement parts. Wheelbarrow handles, core plugs, rewinding plugs, plywood shipping circles, pry bars, lifting sticks, paddles, many types of wood plugs, cutting sticks plus many types of custom made wood products, made to customer's specs. For a quote contact Mark Slade at Mark Slade Manufacturing, 110 South Mill Street, Seymour, WI 54165-1250 or call (920) 833-6557 or e-mail to DRHANDLES2NEW.RR.COM

Plywood, OSB, particleboard, and/or MDF cut to size or shape according to your specifications. From high-end uses like furniture and architectural to lower grades suitable for boxes or pallet decks. Plywood blocks for pallets are also available. Contact Joe Campbell, Steel City Lumber Company, P.O. Box 36189, Birmingham, AL 35236 (800) 733-1907 FAX (205) 733-1709 e-mail joeccampbell@bellsouth.net

Cedar lumber cants, top-paneling, fencing, 4x8x8, 6x6x8 or cut in dimensions you need, excellent cedar and good prices. Leave message Billy Imhof, County Road 8, Littlefork, MN 56653 (218) 278-4417 or (218) 278-6267.

Equipment

Three bell 4a dowel machines with extra blades and setups up to 2-1/2" diameter. Plus large table saw, 30 blades, most are carbide tipped, 12" to 16" diameter. Contact Mark Slade at Mark Slade Manufacturing, 110 South Mill Street, Seymour, WI 54165-1250 or call (920) 833-6557 or e-mail DRHANDLES@NEW.RR.COM pictures available by e-mail.

5 pieces - new inserted tool sawblades 20" diameter x 8 ga. x 3-1/2 bore x 18T style F PHS 3-9/16-4-1/2 - Corley machine specs. Miner brand - ready for immediate shipment. Special reduced price. Slightly used FAS trac model #307 left hand band sawblades sharpener - \$4,500, shipping charges additional - for immediate shipment - sharpens 2-1/2" to 7" wide bands - for blades 20 ft. length and under. Also used inserted tooth sawblades. Also authorized dealer for Simonds, Pacific/Moe, IKS, Piper, Euro, Corley, Helle, Hanchett, Cornell, Meadows/Miner edger, Fricko, Oleson, etc. Contact Harry R., Schell Sawmill Sales & Supplies, Inc.,

601 West Park Street, Blue River, WI 53518. Phone (608)537-2987. Customer order line: 1-800-462-5807. Fax 608-537-2032.

Arasmith salvager hog; Brewer gang saws; Hempstead low speed grinder; Morbark Stac-Trac, late model; Morbark waste recycler; Norcot pavement grinder; Williams hog; Woodpower grinder; Prentice Mod 150 loader; Cornell cant sizer; Cornell double arbor gang; Cornet remote trim; Keystone stake pointers; Lauderdale Hamilton super chop; Newman chamfering machine; Newman KM-16; Pendu gang saws and complete systems; Pendu board stackers; Rip-jac over and under dismantler; Rogers un-nailer; Waechter band resaws; Wilson board unscrambler. Call Bob (610) 621-2893 ramco@comcast.net

Bark processing plant - conveyor and hopper infeed; first big roller screen; Patz chain conveyor under screen; Patz inclined chain conveyor; second roller screen with conveyor transfer; 40' Patz inclined chain conveyor; nugget conveyor; all required electric motors, starters, switches, wiring, etc.

Also Cornell - blowers, edgers, trimmers, notchers, slabsaws, log cleaners, unscrambler, decks; Valby - wood chippers; Farmi - skidding winches (in stock); Hitachi - power tools and chains; Patz - conveyors and belts; Lacey Harmer - laser lights; Danco - rip saws; Webster - vibrating conveyors; Jonsered - chainsaws; Dixon - sawmills, edgers, conveyors, log turners, hydra-dogs, pallet notchers, debarkers, slab edgers, trimsaws, decks, rollcases, small hydraulic loaders and trailers, trailers with loaders for 4 wheelers; Safe-t-shelters - storm shelters; over 100 used electric motors and electrical equipment; used sawmill machinery.

Contact Rusch Equipment, 400 Rusch Road, Antigo, WI 54409 (715) 627-4361 FAX (715) 627-4375.

Jackson hydraulic log turner - with stinger type arm, precise turning, with pusher. Contact: Jackson Lumber Harvester Company, Inc., 830 North State Road 37, Mondovi, WI 54755, (715) 926-3816, FAX (715) 926-4545, Web: www.jacksonlbrharvester.com

Used parts for skidders, small crawlers, and excavators. Shipped daily - parts for CAT, JD, ICH, AC, MH, ATHEY,

BANTAM/KOHERING, BOBCAT, CASE, CLARK, TIMBERJACK, DROTT, FRANKLIN, HEIN-WARNER, INSLEY, LEIBERR, MICHIGAN, MITSUBISHI, NEW HOLLAND, NEW PROCESS, PETTIBONE, TAYLOR TREE FARMER AND TROJAN. We also have engines, transmissions and tires. If we do not have it, we can try to find it with one of our parts locator systems that contact over 300 parts dealers nationwide. We are also interested in buying salvageable machines. Contact Schaefer Enterprises of Wolf Lake, Inc., P.O. Box 136, 4535 State Route 3 North, Wolf Lake, IL 62998. Ask for Andy, Brad, Dick, Jim or Kevin if buying or ask for Jerry if selling. Call (800) 626-6046 or (618) 833-5498, FAX (618) 833-7765 or e-mail us at parts@sawlparts.com or visit our web site at www.sewlparts.com

Services

Jackson Scragg Mill- make money from small logs with a Scragg mill. Unique, innovative features boost production. Contact: Jackson Lumber Harvester Company, Inc., 830 North State Road 37, Mondovi, WI 54755, (715) 926-3816, FAX (715) 926-4545, Web: www.jacksonlbrharvester.com

We manufacture wood items to customers specifications, such as dowels, plugs, wedges, blocks, handles, knobs, legs, mouldings, balls, bases, rollers, spools and shaping. Visit our newly created web site at www.americanwoodworkingco.com Contact American Wood Workings Company, Inc., P.O. Box 335, 2632 Church Street, Montello, WI 53949 phone (608) 297-2131, FAX (608) 297-7124.

Circular, band and carbide saw blade repair. Contact Harry R. Schell, Inc., Harry R. Schell Sawmill Sales & Suppliers Inc., 601 West Park Street, Blue River, WI 53518 Phone (608) 537-2987. Fax (608) 537-2032, Customer order line: (800) 462-5807.

We have a Rayco forestry mower that shreds and mulches brush up to 6" diameter. Great for clearing dense brush from woodlands. The most economical method for clearing brush. Visit our website at www.midwestprairies.com Midwest Prairies LLC, 10651 North Charley Bluff Road, Milton, WI 53563 (608) 868-3169.

Dixon-Rusch Co., LLC, Antigo, WI is the manufacturer of the Dixon-line of sawmill and logging equipment plus we manufacture three different sizes of circular sawmills, two sizes of edgers. Our mills and edgers are made both stationary and portable plus we also manufacture: log turners, belt and chain conveyors, rollcases, log Turners, hydra-dogs, pallet notchers, slab edgers, debarkers, multiple saw trimmers, custom built decks, small and medium size hydraulic loaders, trailers. We are now manufacturing a deer loader (which every deer hunter should have). Rusch Equipment Sales is our local dealers, but we are seeking dealers in other areas. Inquire Dixon-Rusch Co., Inc, 400 Rusch Road, Antigo, WI 54409 (715) 627-4361, Fax (715) 627-4375.

Buying 4/4 through 8/4 #1 com and BTR stained H.M. no brown, green or kiln dried. Contact Joe Zelazoski, 835 Ninth Avenue, Antigo, WI 54409 (800) 240-0974.

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Timber and Forest Products

Wanted firewood processor, small, medium, homemade or in need of repairs. Evenings or weekends. Steve Droster, 6414 Shady Bend Road, Verona, WI 53593 (608) 845-3481.

Equipment

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Manufacturers of wood pallets, new and used. We are a 100+ year old company with an expanding sales force. If you are interested in additional business, contact us to discuss your production capabilities. Gayle Cory, The Nelson Company, P.O. Box 315, New Castle, PA 16103 (724) 652-6681, Ext. 101.

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